

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP 03/09314

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 C23C16/40 C23C16/453 C23C16/503

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 C23C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 14, 5 March 2001 (2001-03-05) & JP 2000 313962 A (SEKISUI CHEM CO LTD), 14 November 2000 (2000-11-14)	1,4-24
Y	abstract	2,3
X	PATENT ABSTRACTS OF JAPAN vol. 1997, no. 02, 28 February 1997 (1997-02-28) & JP 08 253322 A (RES DEV CORP OF JAPAN), 1 October 1996 (1996-10-01)	1,4-24
Y	abstract	2,3
P,X	US 2003/072891 A1 (FUKUDA KAZUHIRO ET AL) 17 April 2003 (2003-04-17)	1,4-24
Y	abstract paragraphs '0018!', '0132!; figure 1	2,3
-/--		

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

1 March 2004

Date of mailing of the international search report

08/03/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax (+31-70) 340-3016

Authorized officer

Hintermaier, F

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP 03/09314

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02 48428 A (KONISHIROKU PHOTO IND ;FUKUDA KAZUHIRO (JP); KONDO YOSHIKAZU (JP);) 20 June 2002 (2002-06-20) the whole document	1, 4-24
Y	US 5 993 916 A (LUO LEE ET AL) 30 November 1999 (1999-11-30) column 3, line 7 - line 20 column 18, line 13 -column 19, line 44	2, 3
Y	US 2001/025205 A1 (LIAO MARVIN ET AL) 27 September 2001 (2001-09-27) paragraphs '0035!', '0176!'-'0209!	2, 3
Y	US 6 329 237 B1 (KIM KYONG MIN ET AL) 11 December 2001 (2001-12-11) abstract column 1, line 52 -column 2, line 9 column 2, line 46 - line 48 column 3, line 25 - line 42 column 4, line 3 - line 8 column 4, line 26 - line 34	2, 3
Y	US 2002/086476 A1 (KIM KYONG-MIN ET AL) 4 July 2002 (2002-07-04) paragraph '0011!	2, 3
A	US 5 295 220 A (HEMING MARTIN ET AL) 15 March 1994 (1994-03-15) the whole document	

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/09314

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
JP 2000313962	A	14-11-2000	NONE	
JP 08253322 2	A		NONE	
US 2003072891	A1	17-04-2003	JP 2002322558 A CN 1407131 A	08-11-2002 02-04-2003
WO 0248428	A	20-06-2002	CN 1398305 T EP 1342810 A1 WO 0248428 A1 US 2003082412 A1 US 2003170472 A1	19-02-2003 10-09-2003 20-06-2002 01-05-2003 11-09-2003
US 5993916	A	30-11-1999	US 5846332 A US 5964947 A US 6129044 A DE 69710961 D1 DE 69710961 T2 EP 1172458 A2 EP 0818558 A1 JP 10070088 A US 2001004478 A1	08-12-1998 12-10-1999 10-10-2000 18-04-2002 31-10-2002 16-01-2002 14-01-1998 10-03-1998 21-06-2001
US 2001025205	A1	27-09-2001	US 6251758 B1 US 6155198 A EP 0818560 A2 JP 10144626 A TW 393684 B US 6291343 B1 US 2002001928 A1 US 6500742 B1 US 2002033533 A1 US 5989999 A EP 0711846 A1 JP 8246152 A JP 9115917 A US 2002114886 A1 US 2002168468 A1 US 2002001976 A1 DE 69619075 D1 DE 69619075 T2 EP 0776991 A1 JP 9312297 A EP 0818559 A2 JP 10125626 A	26-06-2001 05-12-2000 14-01-1998 29-05-1998 11-06-2000 18-09-2001 03-01-2002 31-12-2002 21-03-2002 23-11-1999 15-05-1996 24-09-1996 02-05-1997 22-08-2002 14-11-2002 03-01-2002 21-03-2002 02-10-2002 04-06-1997 02-12-1997 14-01-1998 15-05-1998
US 6329237	B1	11-12-2001	KR 2000042429 A JP 2000228507 A	15-07-2000 15-08-2000
US 2002086476	A1	04-07-2002	KR 2002048623 A JP 2002305195 A	24-06-2002 18-10-2002
US 5295220	A	15-03-1994	DE 4137606 C1 AT 128774 T CA 2082853 A1 DE 59203896 D1 EP 0542210 A1 ES 2077332 T3	30-07-1992 15-10-1995 16-05-1993 09-11-1995 19-05-1993 16-11-1995

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/09314

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5295220	A	JP 2613533 B2 JP 5257024 A	28-05-1997 08-10-1993